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**UNITED STATES DISTRICT COURT**  
**NORTHERN DISTRICT OF CALIFORNIA**

ALEC L., et al.,  
Plaintiffs,  
vs.  
LISA P. JACKSON, et al.  
Defendants.

Case No. C11-02203 EMC

**PLAINTIFFS' NOTICE OF MOTION  
AND MOTION FOR PRELIMINARY  
INJUNCTION AND MEMORANDUM  
OF POINTS AND AUTHORITIES IN  
SUPPORT THEREOF**

Date: November 21, 2011  
Time: 2:00 p.m.  
Place: Courtroom 5, 17<sup>th</sup> Floor

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**NOTICE OF MOTION AND MOTION**

**PLEASE TAKE NOTICE THAT** at 2:00 p.m. on November 21, 2011, or as soon thereafter as counsel may be heard, in the courtroom of the Honorable Edward M. Chen, located on the 17th Floor of the Federal Courthouse at 450 Golden Gate Avenue, San Francisco, California, Plaintiffs will move for a preliminary injunction pursuant to Fed. R. Civ. Proc. 65.

Plaintiffs seek a preliminary injunction requiring Defendants, and each of them, on or before March 19, 2012 to submit a Climate Recovery Plan to this Court setting forth the means to implement the necessary emissions reductions by January 1, 2013 to meet the following reduction trajectory: (1) not allowing United States carbon dioxide (“CO<sub>2</sub>”) emissions to exceed levels existing as of September 1, 2011; and (2) prohibiting significant deviation from the benchmark mitigation scenario of a minimum 6% annual CO<sub>2</sub> reduction trajectory to return atmospheric CO<sub>2</sub> levels to 350 ppm by December 31, 2099. This motion is made on the grounds that immediate and irreparable harm will result to Plaintiffs, the public, and our Nation’s essential natural resources in the absence of immediate injunctive relief. This motion is supported by the accompanying Memorandum and Declarations from Plaintiffs and from renowned experts around the world.

**MEMORANDUM OF POINTS AND AUTHORITIES****INTRODUCTION**

“The State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain.” *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907).

“The power or control lodged in the State, resulting from this common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people.” *Geer v. Connecticut*, 161 U.S. 519, 534 (1896).

Under the Public Trust Doctrine, our federal government has an unalienable duty to protect essential natural resources as a public trust. An atmospheric emergency threatens these natural resources. Because of the urgent need for action, and consistent with its obligation under the Public Trust Doctrine, our federal government must protect our Country’s natural resources by developing a Climate Recovery Plan setting forth the means to implement the necessary emissions reductions by January 1, 2013.

Plaintiffs are confident this Court understands this defining moment for our children. The necessary balance of our Nation’s atmosphere is now precariously close to “tipping points” which science concludes, if reached, will make warming, and the resulting harms and losses, irreparable and irreversible. The increasing temperatures from human-induced climate change already threaten our Nation’s water resources, cause more frequent heat waves, flooding and wildfires, increase extreme weather events, kill coral reefs and other sensitive species, increase illness from insect-borne diseases, and threaten our national and economic security.

Averting a human-made climate crisis should be a matter of carbon science, not carbon politics. The supporting evidence overwhelming concludes rapid reduction of greenhouse gas emissions is required to stop these catastrophic consequences. To regain the necessary balance and prevent more harm, our Country’s atmosphere, now above 390 parts per million (“ppm”) of carbon dioxide, must be restored to an equilibrium of less than 350 ppm carbon dioxide by the end of this century to prevent any sustained heating beyond 1° C (1.8° F). Our Nation’s best experts deem a temperature increase beyond that would be catastrophic. The window of opportunity to stop the warming and preserve our Nation is limited and gets smaller each year. Meanwhile, the harms



1 continue to worsen and certain permanent losses are becoming unavoidable. The responsibility to  
 2 protect our Country's atmosphere rests squarely on the shoulders of the federal government. It has  
 3 the power, the duty, and the means to fulfill its public trust responsibility.

4 Plaintiffs, as beneficiaries of the public trust, are already being harmed by climate change  
 5 and the harms they suffer will only worsen without the relief sought here. This Court should apply  
 6 the Public Trust Doctrine to prevent the irreparable harm resulting from the degradation of the  
 7 atmosphere as a safe natural resource.

## 8 **FACTUAL BACKGROUND**

### 9 **I. Our Nation's Atmospheric Imbalance and Climate Emergency**

10 All of Earth's climate systems (the atmosphere, land, and ocean) are unequivocally warming  
 11 as a result of greenhouse gas emissions ("GHGs") from burning fossil fuels and land use changes  
 12 like deforestation and industrial agriculture. Dec. of Pushker Kharecha, Ph.D. ("Kharecha Dec."),  
 13 ¶¶3-12; Dec. of Kevin Trenberth, Ph.D. ("Trenberth Dec."), ¶ 4. This warming occurs as a result of  
 14 increasing concentrations of GHGs in the atmosphere, resulting in Earth retaining, or trapping,  
 15 more heat and less heat radiating out to space. Over the industrial era, humans have caused a 40%  
 16 increase in atmospheric levels of carbon dioxide: 80% from fossil fuel burning and 20% from land  
 17 use changes. Kharecha Dec., ¶11. "Together these human activities have increased CO<sub>2</sub> from its  
 18 preindustrial value of about 280 ppm to its current value of about 390 ppm," an unprecedented rise  
 19 in CO<sub>2</sub> during the past 800,000 years. *Id.*; Dec. of Ove Hoegh-Guldberg, Ph.D. ("Hoegh-Guldberg  
 20 Dec."), ¶18. With only 4.5% of the world's population, the United States is responsible for 28% of  
 21 the world's CO<sub>2</sub> emissions which have led to these high and unsafe levels of atmospheric CO<sub>2</sub>. Dec.  
 22 of Sivan Kartha, Ph.D. ("Kartha Dec."), ¶¶4-5. Current global heating, caused by this energy  
 23 imbalance, is significantly and adversely impacting our Nation's climate. Kharecha Dec., ¶¶7, 14-  
 24 21. The human-caused imbalance and resulting harms will worsen in the absence of immediate,  
 25 significant measures to reduce emissions, especially carbon dioxide. Kharecha Dec., ¶¶11, 21.

26 During the 12,000 years in which human civilization developed (the Holocene Epoch),  
 27 Earth's atmospheric levels of GHGs, like CO<sub>2</sub>, were just the right balance to maintain the climate  
 28 we have enjoyed, resulting in relatively stable coastlines, sea levels, and average temperatures. Dec.

of Camille Parmesan, Ph.D. (“Parmesan Dec.”), ¶16. In contrast to daily *ambient* temperatures, which can easily vary as much as 15° F, the average global surface temperature had remained relatively stable for the last 12,000 years. Dec. of Julia A. Olson (“Olson Dec.”), Ex. M at 17 (EPA, *Tech. Support Doc. for Endangerment Findings*). Even seemingly small changes in global average temperatures have enormous impacts. The amount of climate change we are experiencing in a single year from increasing levels of atmospheric CO<sub>2</sub> has historically occurred over hundreds of years. Hoegh-Guldberg Dec., ¶18. Eight of the ten warmest years during the period of instrumental records occurred since 2001. Olson Dec., Ex. M at ES-1-2, 29; Kharacha Dec., ¶¶3, 10-11.

Although much excess CO<sub>2</sub> is naturally absorbed by oceans and by plants (chiefly forests), the huge increase of GHG concentrations resulting from human activities has greatly lessened that ability and has detrimentally altered Earth’s ability to maintain the delicate balance of the energy it receives from the sun and radiates back into space. Olson Dec., Ex. M at 17. We not only continue to add GHGs into the atmosphere at a rate that outpaces their removal through natural processes, (*Id.* at ES-2, 16; Kharecha Dec., ¶ 7), but CO<sub>2</sub> has a millennial-scale atmospheric lifetime. Kharecha Dec., ¶10. Thus, a substantial portion of every ton of CO<sub>2</sub> emitted by humans today persists in the atmosphere for as long as one hundred years or more. *See* Olson Dec., Ex. M at 16.

The energy imbalance and the inertia of Earth’s climate system also means there is “in-the-pipeline” warming we are not yet experiencing. Kharecha Dec., ¶7, Hoegh-Guldberg Dec., ¶19. As we emit more GHGs into the atmosphere, we commit our Nation to even more heating, greater imbalance, and additional irreparable harm in the future.

## **II. The Resulting Harm to Our Nation’s Natural Resources and Human Health and Safety**

This energy imbalance and climate instability is harming human health and the health of our natural resources and threatens the habitability of our Country for humans and countless other species. Kharecha Dec., ¶¶7, 12, 14-21. According to Defendant EPA, “greenhouse gases in the atmosphere may reasonably be anticipated both to endanger the public health and to endanger the public welfare of current and future generations.” Olson Dec., Ex. M at 17. Defendant Department of the Interior agrees: “[c]limate change is affecting every corner of the American continent.” Olson Dec., Ex. C at 1.

1           **A.       Warming Oceans, Ocean Acidification, and Coral Reefs Dying**

2           Our oceans have gained a massive amount of heat from this energy imbalance and are  
3 suffering from acidification due to absorbing excess CO<sub>2</sub>. Kharecha Dec., ¶3; Hoegh-Guldberg  
4 Dec., ¶¶7, 12, 17; Trenberth Dec., ¶4; Olson Dec., Ex. M at 103. These changes have caused mass  
5 coral bleaching and mortality and an adverse impact on coral calcification. *Id.* “Further increases  
6 in carbon dioxide and other greenhouse gases beyond current levels will accelerate these losses and  
7 will drive coral reefs beyond known thresholds for mass coral bleaching and mortality . . . the  
8 current climate is already dangerous for coral reefs.” Hoegh-Guldberg Dec., ¶7. Mass coral  
9 bleaching is likely to become more frequent and intense and the biodiversity of reefs will diminish,  
10 leading to multiple species extinctions. *Id.*, ¶¶30-31, 35. These harms jeopardize the enormous  
11 benefits of coral reefs to our Nation, including economic benefits, protection of water quality,  
12 coastal protection, production of sand for beaches, and other ecosystem services. *Id.*, ¶10.

13           **B.       Floods, Drought, Less Snow, and Increased Weather Extremes and Events**

14           Measurements from around the world show weather-related extremes have increased in  
15 severity, frequency, duration, and geographic extent in recent decades. Kharecha Dec., ¶18. Most  
16 concerning among these extremes are droughts, floods, wildfires, heat waves, and large storms, and  
17 consequent threats to human health, food and water supply, and natural ecosystems. *Id.*; *see also*  
18 Dec. of Steven Running, Ph.D. (“Running Dec.”), ¶¶8-11.

19           Human-induced energy imbalance has a direct effect on changes in precipitation and heavy  
20 rains. Trenberth Dec., ¶¶4-5; Kharecha Dec., ¶18. Under continued warming – and thus continued  
21 increase in atmospheric water vapor – dry (or wet) areas are likely to get drier (or wetter); and  
22 floods, droughts, heat waves, and wildfires are likely to become more frequent, intense, and  
23 spatially extensive in the U.S. Kharecha Dec., ¶18; *see also* Trenberth Dec., ¶5. “A warmer  
24 climate therefore increases risks of both drought – where it is not raining – and floods – where it is  
25 – but at different times and/or places.” Trenberth Dec., ¶¶11, 18-21. For example, the heavy rains  
26 this spring led to record breaking flooding along the Mississippi and record tornado outbreaks. At  
27 the same time drought conditions in Texas and Arizona led to many wildfires, including the biggest  
28 on record in Arizona, affecting over 3.6 million acres, and the loss of 1500 homes in Texas. *Id.*

As climate continues to warm, heavy rainfall and thus flooding are likely to become much more frequent, which has enormous adverse consequences for agriculture, hydrology, and water resources. Trenberth Dec., ¶31. Western North America, especially the southwest, has experienced more extreme climate changes than any region on the continent except the Arctic. Declaration of Jonathan T. Overpeck, Ph.D. (“Overpeck Dec.”), ¶3. Drought conditions in the south and southwest are worse than they have been since the rain gauge record. *Id.*, ¶4. Scientists expect these trends to continue and become more severe than projections initially indicated. *Id.*, ¶¶8, 10.

### C. Rising Sea Levels

“Sea level rise is an inevitable consequence of a warming climate, as ice melts and the oceans warm up.” Declaration of Stefan Rahmstorf, Ph.D. (“Rahmstorf Dec.”), ¶2. Global average sea level has risen nearly 20 cm over the past century. Kharecha Dec., ¶15. This amount of sea level rise, combined with human development, has led to loss of coastal wetlands and greater damage from coastal flooding, including the loss of 1900 square miles of Louisiana’s coastal wetlands. Kharecha Dec., ¶15; Olson Dec., Ex. M at ES-7. Scientists’ best estimates on projected sea level rise is that it will reach one meter or more by the end of this century with current emissions of GHGs. Rahmstorf Dec., ¶18. However, the extent of sea level rise is hard to predict because of the uncertain projections in the loss of the major ice sheets on Greenland and Antarctica, which have already begun to lose mass. *Id.*, ¶¶5, 8, 11-13; Kharecha Dec., ¶5, figure 2b, ¶17.

Sea level depends on local variables such as ocean temperature and currents and land movements, which make certain coasts particularly vulnerable. Rahmstorf Dec., ¶¶19-21; Olson Dec., Ex. M at 121. Because there is such delay between warming and sea level rise, the emissions produced today and in the coming decades will cause a long-term delayed response, likely causing massive impacts along our Nation’s coastlines. Rahmstorf Dec., ¶22-23. “The main impacts of sea level rise are increased coastal erosion and land loss, increased risk of flooding during extreme events (storm surges), increasing groundwater levels up to 20-50 km inland, and salt water intrusion into freshwater resources.” Rahmstorf Dec., ¶24. For instance, even with a one-meter rise in sea level, once-per-century storm surge events in New York City, which cause severe damage, would be expected once every three years. *Id.*, ¶25.

1           **D.     Melting Glaciers and Ice Loss**

2           As a result of human-induced energy imbalance, mountain glaciers are receding nationwide  
3 because of warming temperatures. Kharecha Dec., ¶5, Figure 2a; *see* Olson Dec., Ex. M at 111.  
4 Today, Glacier National Park in Montana has only twenty-five glaciers larger than twenty-five  
5 acres, down from 150 in 1850. Olson Dec., Ex. K at 1. Further, rain falling on snow accelerates the  
6 melting of glaciers and snow packs, often causing severe flooding. Olson Dec., Ex. M at 111.

7           Similarly, because of human-induced climate change, there has been a general increase in  
8 permafrost (frozen ground) temperatures and permafrost melting in Alaska. Permafrost degradation  
9 leads to the release of stored methane, which has the potential to “cause a large, uncontrollable  
10 amplifying effect on the background climate warming.” Kharecha Dec., ¶¶25-26.

11           **E.     Harm to Species and Ecosystems**

12           Human-induced climate change has already affected every major biological group studied,  
13 from trees to insects to mammals to fish. Over 50% show measurable response. Kharecha Dec.,  
14 ¶18; Parmesan Dec., ¶¶5-6; Running Dec., ¶¶24-32. If future global warming remains at or beyond  
15 ~1.6°C above preindustrial (i.e. only ~0.8°C warming above present), between 9-31% of the many  
16 millions of Earth’s species are projected to be “committed to extinction.” Kharecha Dec., ¶18; *see*  
17 *also* Running Dec., ¶¶37- 45; Parmesan Dec., ¶¶15, 17.

18           Forest ecosystems have been extensively harmed by significant pest outbreaks such as the  
19 white pine beetle in the western United States. Running Dec., ¶22; Parmesan Dec., ¶11. “There are  
20 now millions of hectare of dead forests in the western United States, and no clear evidence of when  
21 this outbreak will stop.” Running Dec., ¶22. The area of forest burned in wildfires has also  
22 substantially increased in recent decades because a warming climate, causing earlier snowmelt,  
23 longer growing seasons, and higher summer temperatures resulting in drier land, encourages  
24 wildfires. *Id.*, ¶¶20-21; Overpeck Dec., ¶¶6, 9.

25           **F.     Agricultural Impacts and Food Insecurity**

26           In most regions of our Country, as surface temperatures increase, yields in crop production of  
27 the four primary crops (maize, wheat, rice and soybeans) are decreasing or will decrease.  
28 Declaration of David B. Lobell (“Lobell Dec.”), ¶¶11, 16, 18, 20-26. “[C]limate change appears

1 very likely to cause downward pressure on average global yields by 2030” which could lead to as  
 2 much as a 35% increase in cereal prices. *Id.*, ¶23. By mid to late century, it will be difficult to  
 3 produce crop varieties that can withstand extreme heat and drought while still being economically  
 4 viable. *Id.*, ¶27. Scientists’ estimates of impacts to maize production in the U.S. Corn Belt suggest  
 5 an 11% yield loss per degree C of warming. *Id.*, ¶29. In all, warming presents significant impacts  
 6 to food security in coming decades. *Id.*, ¶31.

#### 7 **G. Harm to Human Health**

8 By placing additional stress upon the availability of food, clean air, and clean water and by  
 9 potentially expanding the burden of disease from certain vector-borne diseases, human-induced  
 10 climate change represents a major threat to child health. Dec. of Paul Epstein, M.D. (“Epstein  
 11 Dec.”), ¶2. There are seven ways in which climate change already affects human health and  
 12 particularly that of the young and elderly: (1) heatwaves; (2) asthma and allergies; (3) spread of  
 13 infectious diseases; (4) spread of pests and pathogen; (5) winter weather anomalies; (6) drought;  
 14 and (7) food insecurity. *Id.*, ¶¶3-29. “The most profound implications for human health however,  
 15 lie with the adverse impacts of climate change on the ecological systems – our life support systems  
 16 – that underlie our health and well-being.” *Id.*, ¶29. The resulting problems include: (a)  
 17 dehydration and diarrhea in children and cardio respiratory illnesses; (b) increased numbers of  
 18 asthma sufferers; (c) stronger allergenic proteins; (d) increased spread of infectious diseases,  
 19 including vector-borne diseases and mosquito, water and rodent-borne diseases, malaria, dengue  
 20 fever infections, diarrhea, tick-borne Lyme disease, and E. coli and cryptosporidium infections; and  
 21 (e) increased crop pests and diseases. *Id.*, ¶¶4-10, 12, 15, 18, 20-22; Parmesan Dec. ¶¶13.

#### 22 **H. Psychological Health of Young People**

23 Experts expect an increased incidence of mental and social disorders from climate change  
 24 catastrophes, including depressive and anxiety disorders, posttraumatic stress, increases in  
 25 substance abuse, suicides and outbreaks of violence. Dec. of Lise Van Susteren, M.D. (“Van  
 26 Susteren Dec.”), ¶¶6-46. There are seventy million children in America who risk suffering from  
 27 long-term anxiety and acute reactions due to natural disasters and extreme weather events, in  
 28 addition to the other physical health effects. *Id.*, ¶¶11-14.

1           **I.       Threat to National Security**

2           Top retired United States' military advisors have approved a report finding: (1) "Projected  
3 climate change poses a serious threat to America's national security;" (2) "Climate change acts as a  
4 threat multiplier for instability in some of the most volatile regions of the world;" (3) "Projected  
5 climate change will add to tensions even in stable regions of the world;" and (4) "Climate change,  
6 national security, and energy dependence are a related set of global challenges." Olson Dec. Ex. A,  
7 at 44-45 (*National Security and the Threat of Climate Change*) An increase in refugees, drought,  
8 and extreme weather events will all strain foreign aid and military forces. *Id.* at 7. For instance, by  
9 2025, 40 percent of the world's population will be living in countries experiencing significant water  
10 shortages, while sea-level rise could cause displacement of tens or even hundreds of millions of  
11 people, climate refugees. *Id.* at 16.

12           **III.   It Is Urgent to Restore Our Nation's Atmosphere by Attaining 350 ppm**

13           To protect the atmosphere, our climate, and our Nation's natural resources, our federal  
14 government must return atmospheric CO<sub>2</sub> levels to 350 ppm or below. There are three scientific  
15 bases for attaining 350 ppm for atmospheric CO<sub>2</sub> levels: (1) it will restore the Earth's energy  
16 balance; (2) it will limit global surface heating to no more than 1°C above preindustrial  
17 temperatures; and (3) it will safeguard our oceans.

18           Our nation's top climate scientists have accurately calculated how energy balance can return  
19 to a safe equilibrium by reducing long-lived greenhouse gases such as carbon dioxide. Kharecha  
20 Dec., ¶¶22-24. Right now, the energy imbalance is over one-half watt. *Id.*, ¶7. In order to increase  
21 heat radiation into space by one-half watt, atmospheric carbon dioxide concentrations must decrease  
22 by about 40 ppm to 350 ppm or below, if other long-lived GHGs stay the same as today. *Id.*, ¶22.

23           In addition to restoring energy balance, 350 ppm is the target because temperature change  
24 should be no more than 1°C above preindustrial temperatures in order to protect natural systems.  
25 *Id.* To prevent heating greater than 1°C, concentrations of atmospheric CO<sub>2</sub> must decline to less  
26 than 350 ppm this century. *Id.* Finally, for the health of our oceans and life therein, it is imperative  
27 that atmospheric CO<sub>2</sub> levels decline to below 350 ppm. Hoegh-Guldberg Dec., ¶¶19, 20.



“Given the measured industrial-era increases of temperature (about 0.8°C) and CO<sub>2</sub> (currently at about 390 ppm), achieving these targets implies the need for rapid, large-scale, and sustained reductions in CO<sub>2</sub> (and other GHG) emissions from human activities.” Kharecha Dec., ¶¶22. If our government does not act quickly, a tipping point could be reached and natural feedback loops may not allow the warming to be reversed due to large, uncontrollable amplifying effects. *Id.*, ¶¶25-26; Parmesan Dec., ¶19. To reduce concentration of CO<sub>2</sub> in the atmosphere to 350 ppm by 2100 and avoid heating over 1 degree Celsius over pre-industrial temperatures or the collapse of the oceans, atmospheric carbon dioxide emissions need to peak in 2012 and then begin to decline at an average of 6% per year. Kharecha Dec., ¶24. In addition, carbon sequestering forests and soils must be preserved and replanted to sequester an additional 100 gigatons of carbon through the end of the century. *Id.*

A major implication of climate system inertia is that every year of delay in reducing CO<sub>2</sub> emissions leads to a longer duration of “overshoot” of the temperature and CO<sub>2</sub> targets outlined herein – thereby substantially increasing the risk of severe or irreversible climate impacts. For example, delaying the CO<sub>2</sub> emissions peak by just 8 years... leads to an overshoot of the temperature target that is about 70 years longer. Thus, the requirement of an emissions peak in 2012 and the other stipulations in our mitigation scenario are fully consistent with our best available science and reflect the type and scale of action needed to maximize the likelihood of preventing further irreparable harm, beyond what is already occurring and what is unavoidable due to heating in the pipeline.

Kharecha Dec., ¶29.

#### **IV. Getting to 350 ppm Is Technologically and Economically Feasible**

Defendants have the ability to curtail these devastating harms and losses. *See* Dec. of Arjun Makhijani, Ph.D. (“Makhijani Dec.”); Kharecha Dec., ¶¶27-28. It is technically and economically feasible for the U.S. to transition to an almost fully renewable energy system by at least 2050, at reasonable cost. Makhijani Dec., ¶2 (describing energy efficiency, solar and wind energy, replacing jet fuel with algal biofuels and hydrogen as important elements of the transition). Among other measures, a federal plan could include a renewable portfolio standard, a carbon tax, federal leadership toward carbon neutrality to help create the necessary markets, building, appliance and vehicle efficiency standards including ships and aircraft, CO<sub>2</sub> emission targets per mile traveled, and a steadily declining cap on emissions from large, energy intensive industries. *Id.*



## **LEGAL ARGUMENT**

### **I. Standard of Review**

A preliminary injunction should issue if the plaintiff establishes: “[ (1) ] that he is likely to succeed on the merits, [ (2) ] that he is likely to suffer irreparable harm in the absence of preliminary relief, [ (3) ] that the balance of equities tips in his favor, and [ (4) ] that an injunction is in the public interest.” *Am. Trucking Ass’n, Inc. v. City of Los Angeles*, 559 F.3d 1046, 1052 (9th Cir. 2009). A preliminary injunction “preserve[s] the status quo pending at least some discovery and further hearing on the merits.” *Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1134 (9th Cir. 2011). An injunction should issue where there are “serious questions going to the merits” and where the balance of hardships tips sharply in the plaintiffs’ favor, provided there is a likelihood of irreparable injury and the injunction is in the public interest. *Id.* at 1132, 1134-35.

### **II. Plaintiffs Raise Serious Questions on the Merits and Are Likely to Succeed**

Defendants, as sovereign trustees, have a legal obligation under the Public Trust Doctrine to protect the atmosphere from harm associated with GHG emissions causing climate instability and collapse of our Nation’s natural systems. By allowing GHG emissions are occurring at a rate far exceeding scientific requirements. Thus, Defendants are violating their public trust duties owed to generations of United States citizens, as beneficiaries of the trust, and specifically Plaintiffs.

To sustain an action asserting a violation of the Public Trust Doctrine, a plaintiff must establish the sovereign trustee’s conduct and inaction has disposed of or is wasting a public trust resource (the “res”) in a way that does not preserve or protect the public interests in the res for present and future generations. In this case, Plaintiffs will establish the federal government, as trustee, has caused or allowed significant harm to occur to the atmosphere, a public trust asset, and this harm has significantly interfered with the public’s use of the res.

#### **A. The Federal Public Trust Doctrine is an Attribute of Sovereignty**

The Public Trust Doctrine is an ancient legal mandate incorporated into American jurisprudence. The Doctrine establishes a sovereign obligation to hold critical natural resources in trust for the benefit of the citizen beneficiaries. The doctrine is “rooted in the precept that some resources are so central to the well-being of the community that they must be protected by

1 distinctive, judge-made principles.” Charles L. Wilkinson, *The Public Trust Doctrine in Public*  
 2 *Land Law*, 14 U.C. DAVIS L. REV. 269, 315 (1980). The Public Trust Doctrine is “inherent in the  
 3 nature of sovereignty and are therefore enforceable as limits on federal action.” See Karl S. Coplan,  
 4 *Public Trust Limits on Greenhouse Gas Trading Schemes: A Sustainable Middle Ground*, 35  
 5 Colum. J. Envtl. L. 287, 315 (2010).

6 Pursuant to the Public Trust Doctrine, the sovereign trustee has an affirmative obligation to  
 7 prevent waste, use reasonable skill and care to preserve the trust property, and maintain trust assets.  
 8 See Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the*  
 9 *Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a*  
 10 *Paradigm Shift*, 39 Envtl. L. 43, 69 (Winter 2009). These obligations run to all three branches of  
 11 the government and cannot be abdicated by any branch. See R. Abrams, *Walking the Beach to the*  
 12 *Core of Sovereignty*, 40 U. Mich. J.L. Reform 861, 861 (Summer 2007). The duty to protect  
 13 includes the duty to ensure the continued availability of trust resources for the benefit of present and  
 14 future generations and the duty to promote the utilization of trust resources in a manner consistent  
 15 with their conservation. See *Kelly v. 1250 Oceanside Partners*, 140 P.3d 985, 1003 (Haw. 2006).  
 16 Therefore, the Public Trust Doctrine imposes an affirmative, inalienable obligation on the sovereign  
 17 to preserve and protect trust assets from damage or loss, and not to use the asset in a manner that  
 18 causes injury to present and future trust beneficiaries.

19 The Public Trust Doctrine can be traced from Roman Law through the Magna Carta to  
 20 present day decisions. Published in 533, the Roman Institutes of Justinian codified the right of  
 21 public ownership of important natural resources: “By the law of nature these things are common to  
 22 mankind – the air, running water, the sea, and consequently the shores of the sea.” Justinian,  
 23 Institutes, 1.2.1, 2.1.1 (T. Sandars trans. 1st Am. ed. 1876). Under English common law: “There  
 24 are some few things which... must still unavoidably remain in common . . . Such (among others)  
 25 are the elements of light, air, and water . . .” 2 William Blackstone, Commentaries on the Laws of  
 26 England 4 (1766). The Public Trust Doctrine was incorporated into the first American colonial  
 27 charters, thereby providing the same protection for natural resources in America as provided by the  
 28 Crown in England. *Martin v. Waddell*, 41 U.S. 367, 413 (1842).

1 The United States Supreme Court recognized the Public Trust Doctrine was needed as a  
2 bulwark to protect resources too valuable to be disposed of at the whim of the legislature. *See Ill.*  
3 *Cent. R.R. v. Illinois*, 146 U.S. 387, 453 (1892) (“The state can no more abdicate its trust over  
4 property in which the whole people are interested . . . than it can abdicate its police powers in the  
5 administration of government and the preservation of the peace.”); *see also Geer v. Connecticut*,  
6 161 U.S. 519, 534 (1896), *rev’d on other grounds, Hughes v. Oklahoma*, 441 U.S. 322 (1979).

7 The Public Trust Doctrine imposes both rights and duties on the United States government  
8 with regards to public trust assets. *See United States v. 1.58 Acres of Land*, 523 F. Supp. 120 (D.  
9 Mass. 1981); *City of Alameda v. Todd Shipyards*, 635 F. Supp. 1447 (N.D. Cal. 1986). For  
10 example, the federal government has an inalienable duty to preserve and protect public trust assets  
11 from damage or loss. *In re Complaint of Steuart Transp. Co.*, 495 F. Supp. 38, 40 (E.D. Va. 1980)

12 In *Steuart Transp. Co.*, approximately 30,000 migratory birds were killed as a result of an oil  
13 spill. 495 F. Supp. at 39. In holding both the State of Virginia and the federal government could  
14 seek recovery for the destruction of the birds under the Public Trust Doctrine, the court found the  
15 federal government has a duty to protect and preserve public trust assets: “Under the public trust  
16 doctrine, the State of Virginia and the United States have the right and the duty to protect and  
17 preserve the public's interest in natural wildlife resources. Such right does not derive from  
18 ownership of the resources but from a duty owing to the people.” *Id.* at 40.

19 Additionally, there are both Constitutional and statutory bases to the federal government’s  
20 sovereign public trust obligation. As a fundamental attribute of sovereignty, under the reserved  
21 powers doctrine and the vesting clauses of the U.S. Constitution, the Public Trust Doctrine is  
22 reflected as a limitation on the federal government’s power to allow damage to a public trust asset.  
23 *See Douglas L. Grant, Underpinnings of the Public Trust Doctrine: Lessons from Illinois Central*  
24 *Railroad*, 33 ARIZ. ST. L.J. 849 (2001). As a constitutional foundation for the reserved powers  
25 doctrine, the Constitution’s vesting clauses are an allocation of “power temporally within the  
26 legislative branch by preventing one legislature from impairing essential powers of a later  
27 legislature.” *Id.* at 872. The Supreme Court’s opinion in *Newton v. Commissioners* provided a  
28 foundation for the lodestar public trust opinion, *Illinois Central*, and stated:

Every succeeding legislature possesses the same jurisdiction and power with respect to them as its predecessors. . . . All occupy, in this respect, a footing of perfect equality. This must necessarily be so in the nature of things. It is vital to the public welfare that each one should be able at all times to do whatever the varying circumstances and present exigencies touching the subject involved may require.

*Newton v. Commissioners*, 100 U.S. 548, 559 (1879).

Therefore, one legislature cannot bind a future legislature in matters of crucial public concern. *See Ill. Cent. R.R.*, 146 U.S. at 455. By continuing to abdicate its public trust duties, our federal government will reach a point where it no longer has the ability to protect public trust assets and the public's interest in those assets.

The federal government's sovereign public trust obligations are also recognized and reflected in federal statutes such as the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), the Oil Pollution Act ("OPA"), and the Clean Water Act ("CWA"). 42 U.S.C.S. § 9607(f); 33 U.S.C.S. § 2706; 33 U.S.C.S. § 1321. For example, the OPA designates federal trustees "who shall act on behalf of the public as trustees for natural resources under this Act" and "shall assess natural resource damages" and "develop and implement a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent, of the natural resources under their trusteeship." 33 U.S.C.S. § 2706(b)-(c).

Defendants' public trust obligations are further reflected in their mission statements. The mission of Defendant United States Environmental Protection Agency ("EPA") is to protect human health and the natural environment, on which life depends, including air, water and the land. Olson Dec., Ex. B. at 1. As part of this duty, it must ensure that federal laws protecting human health and the environment are implemented and enforced effectively and fairly. *Id.*

The mission of Defendant United States Department of Interior ("DOI") is to protect America's natural resources and heritage, honor cultures and tribal communities, and supply the energy to power the future of America. Olson Dec., Ex. D. It has a duty to "uphold the federal government's trust responsibilities to 562 Indian Tribes; conserve fish, wildlife and their habitats; manage water supplies for more than 30 million people; and protect the icons of our national heritage." Olson Dec., Ex. C at 1.

1 Defendant United States Department of Agriculture (“USDA”) has authority over our  
 2 nation’s food, agriculture, and many natural resources, including national forests. Olson Dec., Ex.  
 3 E. “The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of  
 4 the Nation’s forests and grasslands to meet the needs of present and future generations.” Olson  
 5 Dec., Ex. F at 1.

6 The mission of Defendant United States Department of Commerce (“Commerce”) includes  
 7 “provid[ing] effective management and monitoring of our nation’s resources and assets to support  
 8 both environmental and economic health.” Olson Dec., Ex. G at 1. Through its agency, National  
 9 Oceanic and Atmospheric Administration (“NOAA”), it is also responsible for preserving and  
 10 protecting natural resources, including fisheries, coastal areas, marine life, and *our atmosphere*.  
 11 Olson Dec., Ex. H.

12 The mission of Defendant United States Department of Energy (“DOE”) is to advance the  
 13 national, economic, and energy security of the United States through clean, reliable, and affordable  
 14 energy, to protect the environment, and to encourage innovations in science and technology that  
 15 improve the quality of life. Olson Dec., Ex. I.

16 The mission of Defendant United States Department of Defense (“DOD”) is to protect the  
 17 security of our country. Olson Dec., Ex. J at 1. DOD is the oldest and largest government agency,  
 18 and as the nation’s largest employer is responsible for enormous greenhouse gas emissions from its  
 19 vehicle fleet, electricity for buildings, and its weapons infrastructure. *Id.*

20 Collectively, these Defendant federal agencies are charged with protecting citizens and our  
 21 Nation. Each of them is a trustee of the atmosphere.

22 **B. The Atmosphere is an Essential Public Resource, Held in Trust By Our Federal**  
 23 **Government**

24 The Public Trust Doctrine imposes the duty on the sovereign trustee to prevent harm to,  
 25 protect, and preserve any trust asset that is not susceptible to private ownership. The Public Trust  
 26 Doctrine also applies to those assets extending beyond the borders of a state, making federal  
 27 protection of them of paramount importance. In fact, the Supreme Court has held resources only  
 28 temporarily within a state, such as migratory birds, are best regulated by the federal government.

1 *Missouri v. Holland*, 252 U.S. 416, 435 (1920) (“Here a national interest of very nearly the first  
2 magnitude is involved. It can be protected only by national action in concert with that of another  
3 power.”).

4 In its first recognition of the Public Trust Doctrine, the United States Supreme Court  
5 explained public trust duties arise when the asset in question is “property of a special character.”  
6 *Ill. Cent. R.R. v. Illinois*, 146 U.S. at 454 .

7 The State can no more abdicate its trust over property in which the whole  
8 people are interested, like navigable waters and the soils under them, so as  
9 to leave them entirely under the use and control of private parties . . . than  
it can abdicate its police powers in the administration of government and  
the preservation of peace.

10 *Id.* at 453. While *Illinois Central* dealt specifically with the alienation of land beneath navigable  
11 waters, the Supreme Court’s broad language in the decision is applicable to the atmosphere. Much  
12 like the public trust asset discussed in *Illinois Central*, the atmosphere is “property of a special  
13 character” “in which the whole people are interested” that should not be left “entirely under the use  
14 and control of private parties.” The atmosphere is undeniably “a subject of public concern to the  
15 whole people of the state.” *Ill. Cent. R.R.*, 146 U.S. at 455. Therefore, it is a fundamental natural  
16 resource necessarily entrusted to the care of our federal government, in trust, for its preservation  
17 and protection as a common property interest. See *Georgia v. Tenn. Copper Co.*, 206 U.S. at 237.

18 Over time, courts have expanded the Public Trust Doctrine beyond original societal concerns  
19 of commerce and navigation to other modern concerns such as biodiversity, wildlife, and recreation.  
20 See, e.g., *Nat’l Audubon Soc’y v. Superior Court of Alpine Cnty.*, 658 P.2d 709, 719 (Cal. 1983);  
21 *Ctr. for Biological Diversity v. FPL Grp.*, 83 Cal. Rptr. 3d 588, 599 (Cal. Ct. App. 2008); *Matthews*  
22 *v. Bay Head Improvement Assoc.*, 471 A.2d. 355, 363 (N.J. 1984). Indeed, courts have “perceiv[ed]  
23 the public trust doctrine not to be ‘fixed or static,’ but one to be molded and extended to meet  
24 changing conditions and needs of the public it was created to benefit.” *Matthews*, 471 A.2d. at 365;  
25 see also *Marks v. Whitney*, 491 P.2d 374, 380 (1971) (“In administering the trust the state is not  
26 burdened with an outmoded classification favoring one mode of utilization over another.”).

27 The same test used by courts for over a century to determine whether a particular waterway is  
28

protected by the Public Trust Doctrine, navigability, is equally applicable to the atmosphere to determine if it too is subject to the Public Trust Doctrine. Much like navigable waterways, the atmosphere also is navigable and therefore not subject to private ownership. *See Claassen v. City & Cnty. of Denver*, 30 P.3d 710, 713 (Colo. App. 2000) (“Navigable airspace is in the public domain, and the surface owner’s property interest in airspace above his or her land is generally limited to the airspace which is below navigable limits.”); *United States v. Causby*, 328 U.S. 256, 261 (1946) (“To recognize such private claims to the airspace would clog these highways, seriously interfere with their control and development in the public interest, and transfer into private ownership that to which only the public has a just claim.”).

Because the atmosphere is navigable and in the public domain, the Public Trust Doctrine requires the sovereign trustee must protect the public’s interest in it. To allow carbon emissions to clog the atmosphere and destabilize the climate is the equivalent of allowing the transfer of the atmospheric resource into private ownership, a resource to which only the public has a just claim.

The question of whether the atmosphere must be protected as a public trust resource by Defendants is a different but analogous question to the claims in *Native Village of Quinhagak v. U.S.*, where the Ninth Circuit held that the Native Villages had raised serious questions as to “whether, for purposes of ANILCA, public lands include navigable waters . . . [more specifically] whether the . . . regulation interpreting ANILCA to exclude navigable waters from the definition of public lands is unreasonable,” and “whether the navigational servitude held by the United States on navigable waters constitutes the necessary federal ‘interest’ in the waters in question.” 35 F.3d 388, 392 (9th Cir. 1994). There the court also held that the balance of hardships tipped sharply in favor of plaintiffs in light of “the evidence of the threatened loss of an important subsistence food source and destruction of their culture and way of life.” *Id.* at 394, n.5.

#### **C. Defendants Have Violated Their Public Trust Duties To the Atmosphere**

As demonstrated above, current concentrations of GHG are demonstrably too high, placing our Nation on the brink of climate catastrophe. United States carbon dioxide emissions are a major contributor to our national climate crisis. Kartha Dec., ¶¶3-5, 8. Defendants have allowed a public trust asset, the atmosphere, to be severely damaged with 28% of the world’s carbon emissions and



1 have contributed significantly to the unhealthy clogging of the atmosphere, so that today, it contains  
2 CO<sub>2</sub> levels that are 11.5% over the upper limit of health and stability of 350 ppm. Kartha Dec, ¶¶3-  
3 5, 9. “Even if the United States stabilized emissions at this year’s levels, holding emissions steady  
4 the remainder of the century, it would still nearly deplete the entire world’s carbon dioxide budget  
5 (emitting 510 billion tons).” Kartha Dec., ¶9, *see also* ¶¶6-16. Preventing the worst consequences  
6 of human-induced energy imbalance would be impossible without United States’ emission  
7 reductions of at least 6% per year. *Id.*, ¶16.

8         Since at least the late 1970s the federal government has known about the “grave threat” from  
9 human-induced climate change and the “major federal action [needed] to contain the buildup of  
10 greenhouse gases in Earth’s atmosphere.” Dec. of James Gustave Speth (“Speth Dec.”), ¶3. A  
11 National Climate Program Act was passed in 1978 “to establish a national climate program that will  
12 assist the Nation and the world to understand and respond to natural and man-induced climate  
13 processes and their implications.” 15 U.S.C. § 2901(3) (1978). The Act’s Senate Report stated  
14 “more severe weather conditions in the last few years may be indicative of significant climate  
15 fluctuations and change in the future. Such changes would likely cause serious problems for the  
16 United States in a number of critical areas, such as food production, energy supplies, water  
17 resources, and maintenance of human health. The United States must be prepared to adapt to future  
18 climate fluctuations should they occur.” S. Rep. No. 95-740, at 1 (1978), *reprinted in* 1978  
19 U.S.C.C.A.N. 1386. While legislators were clearly aware of the threats climate change posed,  
20 Congress failed to take any meaningful action to reduce GHG emissions and avert the impacts that  
21 were predicted 33 years ago and that our Country is facing today.

22         Recognizing the complete lack of a coordinated national approach to climate change, our  
23 President issued an Executive Order in 2009 “to establish an integrated strategy towards  
24 sustainability in the Federal Government and to make reduction of greenhouse gas emissions a  
25 priority for Federal agencies.” Exec. Order No. 13,514, 74 Fed. Reg. 52,117 (Oct. 5, 2009).  
26 Existing “mandates have established various goals for energy management, renewable energy use,  
27 and other activities that may reduce GHG emissions, but none have specifically required  
28 comprehensive reporting of GHG emission inventories or establishment of targets for reduction of



1 emissions.” Olson Dec., Ex. N at 4 (CEQ Guidance) (emphasis added).

2 Defendants, and each of them, have violated their sovereign public trust obligations and are  
3 contributing, actively and passively, to a serious threat to individual and national security.

4 Normal political and policymaking processes in the United States have  
5 completely failed to respond in a manner that is in the best interests of our  
6 county and its people. Our government has simply failed to act responsibly  
7 to protect the atmospheric commons for current and future generations.  
The prospect for responsive action from Congress today is widely viewed  
as grim. This dereliction of fiduciary duty, if continued, will be the failing  
for which our children and grandchildren will least forgive us.

8 Speth Dec., ¶8.

9 **D. This Court Has the Authority to Enforce the Trust on Behalf of Public Beneficiaries**

10 Federal courts necessarily have jurisdiction to hear federal public trust cases because it is a  
11 judicially created and enforced doctrine. Plaintiffs, as beneficiaries of the public trust, retain the  
12 right to bring this action against the public trustees for failing to discharge their duties. Many cases  
13 “have been brought by private parties to prevent agencies of government from abandoning or  
14 neglecting the rights of the public with respect to resources subject to the public trust.” *Ctr. for*  
15 *Biological Diversity v. FPL Grp.*, 166 Cal.App4th 1349, 1366 (2008) (citing *Ill. Cent. R.R.*, 146  
16 U.S. 387).

17 The Public Trust Doctrine does not dictate a specific process or action. The doctrine is an  
18 attribute of sovereignty and like the Constitution, it overlays all other acts of government, including  
19 the enactment of legislation or the promulgation of regulations. The U.S. Supreme Court in *Illinois*  
20 *Central* explains this point. In that case, Congress, the State, and the city had enacted laws that  
21 spoke precisely to the issue in the case, the transfer of title to lands to the railroad company to  
22 improve commerce in Illinois around the harbor of Chicago. *Ill. Cent. R.R.*, 146 U.S. at 439-440,  
23 450-451. In reviewing the land transfer under the sovereign’s public trust obligation, Justice Field  
24 explained that even though the legislative acts allowed the transfer of public property, the Public  
25 Trust Doctrine limits the ability of the sovereign to transfer lands submerged by navigable waters  
26 because those navigable waters were a public trust resource deserving protection by the sovereign  
27 trustee. *Id.* at 452-464.

28 As the Supreme Court of Arizona once said in underscoring the judicial role in enforcing the

trust, “[j]ust as private trustees are judicially accountable to their beneficiaries for dispositions of the res, so the legislative and executive branches are judicially accountable for their dispositions of the public trust. The beneficiaries of the public trust are not just present generations but those to come. The check and balance of judicial review provides a level of protection against improvident dissipation of an irreplaceable res.” *Ariz. Ctr. for Law in the Pub. Interest*, 837 P.2d at 169. The California Supreme Court affirmed this principle by explaining that courts have concurrent jurisdiction with other branches over the public trust. *Nat’l Audubon*, 33 Cal.3d at 731-732.

A trust claim brought against a sovereign does not invade the sphere of regulation—deciding what activities to curtail and to what extent—but rather demands an accounting of the overall effectiveness of the trustee’s actions to achieve asset protection. A public trust claim against government simply does not put courts in the position of making policy determinations as to who should be regulated and to what extent; rather, “judicial review of public trust dispensations complements the concept of a public trust.” *Ariz. Ctr. for Law in the Pub. Interest*, 837 P.2d at 169.

### **III. Plaintiffs Suffer Irreparable Harm in the Absence of Injunctive Relief**

Plaintiffs will suffer irreparable harm without the issuance of a preliminary injunction requiring immediate federal government action to cap and then reduce carbon dioxide emissions in the atmosphere. Because of climate inertia and “heating already in the pipeline,” the status quo of our climate cannot feasibly be maintained; it will continue to change. However, this Court and Defendants have the ability to preserve as much of the status quo as is feasible and avoid contributing to increasing atmospheric levels of CO<sub>2</sub>.

“Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, i.e., irreparable.” *Amoco Prod. Co. v. Village of Gambell, AK*, 480 U.S. 531, 545 (1987). The instant case not only involves actual ongoing environmental injuries, but serious injuries to public health, safety and welfare, economic losses and threats to national security as well. The U.S. Supreme Court has recognized the scientific consensus that GHG from human activities are increasing average global temperatures and producing changes to the climate. *Massachusetts v. EPA*, 549 U.S. 497, 521-23 (2007). The Court

1 stated, “[t]he harms associated with climate change are serious and well recognized,” and “qualified  
 2 scientific experts involved in climate change research have reached a strong consensus that global  
 3 warming threatens (among other things) a precipitate rise in sea levels by the end of the century,  
 4 severe and irreversible changes to natural ecosystems, a significant reduction in water storage in  
 5 winter snowpack in mountainous regions with direct and important economic consequences . . . an  
 6 increase in the spread of disease, [and] . . . that rising ocean temperatures may contribute to the  
 7 ferocity of hurricanes.” *Massachusetts v. EPA*, 549 U.S. at 521–22. The Court found “[a]  
 8 reduction in domestic emissions would slow the pace of global emissions increases, no matter what  
 9 happens elsewhere.” *Id.* at 525-26.

#### 10 **A. Plaintiffs Are Suffering Irreparable Harm**

11 Each Plaintiff is experiencing serious environmental, economic, physical, cultural, emotional,  
 12 psychological, and/or aesthetic injuries. Plaintiffs are very likely to suffer future irreparable harms  
 13 resulting from the unsafe atmosphere and human-induced climate change. Some of these harms are  
 14 outlined here.

15 Nelson, a youth member of the Yup’ik Eskimo Tribe, lives in Kipnuk, Alaska and is being  
 16 personally harmed by “warming temperatures, delayed onset of winter and sea ice formation,  
 17 permafrost thaw, increased flooding and erosion” in his native village. Nelson Dec., ¶5. The  
 18 delayed onset of winter and sea ice formation is a critical issue for Nelson’s way of life and that of  
 19 his village. *Id.*, ¶¶6, 14. The increased rains and warm temperatures lead to increased flooding, all  
 20 of which makes it hard for Nelson to travel from village to village and to hunting areas and which  
 21 poses a direct threat to his home. *Id.*, ¶¶9-12, 14. Nelson’s land is being eroded irreparably by the  
 22 melting and flooding of the river and his family may soon have to move if the erosion continues.  
 23 *Id.*, ¶12. Nelson’s village is faced with health risks too as their sewage holding ponds overflow  
 24 during these flood events. *Id.*, ¶13. Dr. Kharecha confirms the even higher temperatures in Alaska  
 25 and the significant thawing from global warming. Kharecha Dec., ¶¶5-6.

26 Plaintiffs Alec, Grant, Garrett, and Zoe have all experienced first-hand the devastation of  
 27 white pine beetle outbreaks in the forests of California and Colorado, where they have lived and  
 28 would like to recreate, but will never again be able to walk through and enjoy those forests alive

1 with trees and wildlife. Grant Dec., ¶¶2-3; Garrett Dec., ¶2; Alec Dec., ¶9; Zoe Dec., ¶15. Drs.  
 2 Running and Parmesan confirm the tremendous loss of forests in the west is due to increased  
 3 temperatures and drought, which enable the life cycle of the beetles. Running Dec., ¶22; Parmesan  
 4 Dec., ¶11, Table 1; Epstein Dec., ¶17. Grant and Garrett have also experienced the eastern outbreak  
 5 of Asian beetles. Grant Dec., ¶9; Garrett Dec., ¶2; Epstein Dec., ¶¶17-20.

6 Plaintiff Alec suffers from asthma and allergies in southern California. Alec Dec., ¶6.  
 7 According to Dr. Epstein, asthma and allergies will be exacerbated by heat and increased water  
 8 vapor caused by the warming climate. Epstein Dec., ¶¶5-9. These impacts to Alec's health  
 9 compromise his recreational and physical activities. Alec Dec., ¶¶6-7. Plaintiff Grant also suffers  
 10 from a climate-related health condition. Grant Dec., ¶7. He has developed an allergic reaction to  
 11 heat and as summer temperatures continue to rise in his home-state of Virginia, his physical activity  
 12 becomes increasingly limited and he suffers severely from heat rash. *Id.*

13 Some Plaintiffs are ocean lovers and they are already seeing changes in their beaches and  
 14 fear that their ability to continue to recreate on those beaches and in those ocean waves will be lost  
 15 with sea level rise. Alec Dec., ¶¶11-12, 18, Ex. A; Zoe Dec., ¶6; Grant Dec., ¶8; Madeleine Dec.,  
 16 ¶14; *see* Rahmstorf Dec., ¶24 (stating main impacts of sea level rise); *see Massachusetts v. EPA*,  
 17 549 U.S. at 526 (finding that global warming is already causing harm from rising sea levels in  
 18 Massachusetts). In order to stop further sea level rise, and the irreparable harm to coastlines,  
 19 emissions must be immediately reduced. Rahmstorf Dec., ¶27; Kharecha Dec., ¶16.

20 Plaintiffs are harmed due to the effects of climate change on marine and freshwater fish and  
 21 wildlife, including coral reefs. Grant Dec., ¶¶6, 12, 15; Madeleine Dec., ¶15; Zoe Dec., ¶11.  
 22 Plaintiff Zoe's family operates a fishing boat and supply business on Apalachicola Bay in the  
 23 Florida Panhandle and her family's business has suffered. Zoe Dec., ¶¶18-19. A long drought has  
 24 increased the salinity of the bay because of less fresh water flowing into the bay, thereby impacting  
 25 wildlife. Zoe Dec., ¶20.

26 Several plaintiffs have already been impacted by extreme weather patterns, which are caused  
 27 in part by climate change. Grant Dec., ¶4-5 (loss of electricity and water and wildfires just miles  
 28 away from their home in the mountains); Garrett Dec., ¶2 (same); Madeleine Dec., ¶10-11 (drought,

1 water shortages and heat waves leading to wildfires threatening her home), ¶9 (heat waves in NYC  
 2 and New Orleans); Alec Dec., ¶8 (smoke from wildfires in southern California, drought in Ojai  
 3 watershed, and huge rains leading to flooding in the spring); Zoe Dec., ¶21 (hurricanes). Dr.  
 4 Trenberth confirms global warming directly influences drought, wildfires, heat waves, heavy rains,  
 5 and flooding because “all weather events are now occurring in an environment which has changed  
 6 in significant ways.” Trenberth Dec., ¶¶4-5.

7 Jamie, a youth member of the Navajo Nation and part of the Bitterwater and Tangle People  
 8 Clans, is being harmed by drought and excessive heat in Arizona. Jamie Dec., ¶¶1-2, 4, 6. She had  
 9 to move from her home because of the heat and lack of clean water and because it continues to get  
 10 hotter and drier. *Id.*, ¶¶6, 9, 11, 12; Overpeck Dec., ¶¶3-4, 8-10. The lack of water harms Jamie  
 11 and her people’s way of life. *Id.*, ¶13.

12 Plaintiffs are also emotionally and psychologically affected by climate change and the  
 13 unsafe state of the atmosphere. They are scared about the changes and what the future holds for  
 14 them, their families and for others around the world. Alec Dec., ¶14; Nelson Dec., ¶¶3, 11;  
 15 Madeleine Dec., ¶¶3-4, 16; Zoe Dec., ¶¶2, 12, 23; Jamie Dec., ¶14; *see* Van Susteren, ¶33. Each is  
 16 an activist in his or her own right and as a result, according to experts, will likely experience greater  
 17 psychological impacts than the average child and harm to their well-being and perhaps even  
 18 depression as climate change continues. Van Susteren Dec., ¶¶40-42; Alec Dec., ¶¶2-5, 12-18;  
 19 Grant Dec., ¶¶14, 16-18; Garrett Dec., ¶2; Nelson Dec., ¶¶2-4, 15; Madeleine Dec., ¶¶2-8; Zoe  
 20 Dec., ¶¶3-4; Jamie Dec., ¶¶2, 4-5, 7.

21 Defendant EPA concurs that the harms from climate change go beyond environmental  
 22 injuries and that “greenhouse gases in the atmosphere may reasonably be anticipated both to  
 23 endanger the public health and to endanger the public welfare of current and future generations.” 74  
 24 Fed. Reg. at 66516. Plaintiffs have a right to a healthy and livable future, which is being violated  
 25 by the federal government’s failure to control our atmosphere in violation of its trust duties.

26 **B. This Level of Irreparable Harm Warrants Issuance of a Preliminary Injunction**

27 The likelihood of irreparable harm demonstrated here vastly exceeds the level of harm in  
 28 other cases where injunctive relief has been awarded. *See, e.g., Alliance for Wild Rockies v.*

1 *Cottrell*, 632 F.3d 1127 (9th Cir. 2011) (logging project would prevent the use and enjoyment of  
 2 1,652 acres of forest); *South Fork Band Council of W. Shoshone of Nev. v. U.S. Dept. of Interior*,  
 3 588 F.3d 718 (9th Cir. 2009) (injunction issued to prevent environmental injury to tribes). In a case  
 4 about protecting the safety of children, the Ninth Circuit affirmed a preliminary injunction ordering  
 5 state defendants to perform seismic safety testing at a school site or to close the school. *Students of*  
 6 *California School for the Blind v. Honig*, 736 F.2d 538, 540 (9th Cir. 1984). “The testimony of a  
 7 court-appointed expert convinced the district court that additional tests were needed to determine  
 8 the seismic safety of the Fremont school.” *Id.* at 540. The court found the students raised serious  
 9 legal questions and were likely to succeed on the merits. *Id.* at 546 (citation omitted).

10 **C. The Preliminary Relief Sought Will Prevent Further Irreparable Harm**

11 This Court has the authority to grant the relief sought. *See Swann v. Charlotte-Mecklenburg*  
 12 *Bd. of Educ.*, 402 U.S. 1, 15 (1971) (“the scope of a district court’s equitable powers to remedy past  
 13 wrongs is broad, for breadth and flexibility are inherent in equitable remedies.”); *Alaska Ctr. for the*  
 14 *Env’t v. Browner*, 20 F.3d 981, 986 (9th Cir. 1994); *High Sierra Hikers Ass’n v. Blackwell*, 390  
 15 F.3d 630, 645 (9th Cir. 2004). Courts have ordered parties to create a plan to remedy the problem  
 16 being litigated. *See, e.g., Brown v. Plata*, 131 S. Ct. 1910, 1928 (2011) (“[T]he court ordered the  
 17 State to formulate a plan for compliance and submit its plan for approval by the court.”); *Health*  
 18 *Care for All, Inc. v. Romney*, No. Civ.A. 00-10833RWZ, 2005 WL 1660677, at \*15 (D. Mass. July  
 19 14, 2005) (ordering parties to attempt to develop a joint remedial program and to report their  
 20 progress to the court); *United States v. Mass. Mar. Acad.*, 762 F.2d 142, 147 (1st Cir. 1985)  
 21 (affirming district court decision ordering Defendants “to file a plan to eliminate the effects of their  
 22 unlawful discrimination ‘in a swift and efficient manner’”).

23 Ordering creation of a plan as preliminary relief for Defendants’ public trust violations  
 24 allows other branches of the government to determine the details of how to reduce CO<sub>2</sub> emissions  
 25 and protect the atmosphere as a public trust resource. *See e.g., Brown*, 131 S. Ct. at 1928 (“The  
 26 court did not order the State to achieve this reduction in any particular manner. Instead, the court  
 27 ordered the State to formulate a plan for compliance and submit its plan for approval by the court.”)  
 28

1 **IV. Plaintiffs' Requested Injunctive Relief Would Serve the Public Interest**

2 The Supreme Court and the Ninth Circuit have emphasized the importance of considering  
3 and weighing the public interests affected by, and the public consequences of, both granting and  
4 denying a preliminary injunction. *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7,  
5 24 (2008); *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312 (1982); *Fund for Animals, Inc. v.*  
6 *Lujan*, 962 F.2d 1391, 1400 (9th Cir. 1992). The public interest served in granting the injunction  
7 must “outweigh other public interests that cut in favor of not issuing the injunction.” *Alliance for*  
8 *Wild Rockies v. Cottrell*, 632 F.3d 1127, 1138 (9th Cir. 2011). Because Defendants are failing to  
9 take the necessary steps to protect the trust res, the public consequences will be catastrophic and  
10 irreparable absent an immediate preliminary injunction. *See Massachusetts v. EPA*, 549 U.S. at 526  
11 (where relief would reduce risk of catastrophic harm from climate change, it was warranted).

12 “[O]n the side of issuing the injunction, we recognize the well-established ‘public interest in  
13 preserving nature and avoiding irreparable environmental injury.’” *Alliance for Wild Rockies v.*  
14 *Cottrell*, 632 F.3d at 1138. “The public interest analysis for the issuance of a preliminary injunction  
15 requires us to consider ‘whether there exists some critical public interest that would be injured by  
16 the grant of preliminary relief.’” *Indep. Living Ctr. of S. Cal., Inc. v. Maxwell-Jolly*, 572 F.3d 644,  
17 659 (9th Cir. 2009), *cert. granted*, 131 S. Ct. 992 (2011). As in *Alliance for Wild Rockies*, “[t]he  
18 public interests that *might* be injured by a preliminary injunction here . . . do not outweigh the  
19 public interests that *will* be served.” 632 F.3d at 1138 (emphasis added).

20 **V. The Balance of Hardships Tips Sharply in Favor of Plaintiffs**

21 The Supreme Court has stated “[e]nvironmental injury, by its nature, . . . is often . . .  
22 irreparable,” and “[i]f such injury is sufficiently likely, therefore, the balance of harms will usually  
23 favor the issuance of an injunction to protect the environment.” *Amoco Prod. Co. v. Village of*  
24 *Gambell, AK*, 480 U.S. 531, 545 (1987). The balance of hardships tips sharply in favor of Plaintiffs.  
25 Defendants’ failure to reduce our nation’s carbon dioxide emissions by the amount necessary to  
26 prevent global heating more than 1° C over pre-industrial levels and lower atmospheric carbon  
27 concentrations to below 350 ppm, will continue to contribute to and exacerbate global warming.  
28 The hardships Plaintiffs will suffer if preliminary injunctive relief is denied significantly outweigh



any fiscal challenges the federal government may assert if preliminary injunctive relief is granted.

## **VI. No Bond Should Be Required**

There are no grounds to require Plaintiffs post any more than a nominal bond as a condition of granting the requested relief. Courts have “discretion to dispense with the security requirement, or to request mere nominal security, where requiring security would effectively deny access to judicial review.” *Save Strawberry Canyon v. Dept. of Energy*, 613 F. Supp. 2d 1177, 1190-91 (N.D. Cal. 2009). The Ninth Circuit, and district courts within it, consistently reject defendants’ request for substantial bonds in environmental cases, emphasizing there is little reason for requiring more than a nominal bond of plaintiffs, who are acting much as private attorneys general. *See, e.g., Tenakee Springs v. Clough*, 915 F.2d 1308, 1314 n. 4 (9th Cir. 1990); *Wilderness Soc. v. Tyrrel*, 701 F. Supp. 1473, 1492 (E.D. Cal. 1988); *California v. Tahoe Regional Planning Agency*, 766 F.2d 1319, 1325-26 (9th Cir. 1985).

## **CONCLUSION**

Our nation’s atmosphere is a quintessential public trust resource. The atmospheric trust resource already contains excessive concentrations of CO<sub>2</sub>. Using the best available science, major reductions in emissions of carbon dioxide are warranted immediately. Plaintiffs have shown there is a likelihood of irreparable harm; there are serious questions on the merits; the balance of hardships tips sharply in their favor; and the public interest favors a preliminary injunction.

Plaintiffs do not request a particular method for emissions reductions. Rather Plaintiffs request this Court order Defendants to submit a Climate Recovery Plan. Such an order will enforce the public trust obligation in the atmospheric trust and to prevent irreparable harm resulting from the degradation of the atmosphere as a safe natural resource.

Respectfully submitted,



1 Dated: September 28, 2011

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